

What is claimed is:

1. A semiconductor device comprising:
 - a semiconductor chip;
 - a wiring board over which said semiconductor chip is mounted;
 - a plurality of bonding wires for connecting surface electrodes of said semiconductor chip to terminals of said wiring board corresponding thereto; and
 - a sealing section in which said semiconductor chip and said plurality of bonding wires are covered and sealed with resin, said sealing section being formed of an insulating elastic resin, wherein said elastic resin has an elastic modulus of 1 to 200 MPa at a temperature of 150°C or higher, and a height of said bonding wire from a main surface of said semiconductor chip to a top of said bonding wire is 0.2 mm or less.
2. The semiconductor device according to Claim 1,
 - wherein a height of said bonding wire from the main surface of said semiconductor chip to the top of said bonding wire is from 0.1 mm or more to 0.2 mm.
3. The semiconductor device according to Claim 1,
 - wherein a wire horizontal distance from a bonding start point to an end point of said bonding wire is 1.5 mm or less.

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4. The semiconductor device according to Claim 3,
wherein said wire horizontal distance is from 0.5 mm to
1.5 mm.
5. The semiconductor device according to Claim 1,
wherein said elastic resin is silicone resin.
6. The semiconductor device according to Claim 1,
wherein chip components having connection terminals formed
on both ends thereof are connected to said wiring board by solder,
and said solder is mainly comprised of tin (Sn) and antimony (Sb).
7. The semiconductor device according to Claim 1,
wherein chip components having connection terminals formed
on both ends thereof are connected to said wiring board by solder,
and said solder does not contain lead (Pb).
8. The semiconductor device according to Claim 1,
wherein said elastic resin has an elastic modulus of 5 to
10 MPa at a temperature of 150°C or higher.
9. The semiconductor device according to Claim 1,
wherein a recess is formed in said wiring board and said
semiconductor chip is disposed in said recess.

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10. A semiconductor device comprising:
a semiconductor chip;
a wiring board over which said semiconductor chip is mounted;

a plurality of bonding wires for connecting surface electrodes of said semiconductor chip to terminals of said wiring board corresponding thereto; and

a sealing section in which said semiconductor chip and said plurality of bonding wires are covered and sealed with resin, said sealing section being formed of a silicone resin which is an insulating elastic resin with an elastic modulus of 1 to 200 MPa at a temperature of 150°C or higher,

wherein a height of said bonding wire from a main surface of said semiconductor chip to a top of said bonding wire is 0.2 mm or less, and a wire horizontal distance from a bonding start point to an end point of said bonding wire is 1.5 mm or less.

11. A semiconductor device comprising:
a semiconductor chip;
a wiring board over which said semiconductor chip is mounted;

a plurality of bonding wires for connecting surface electrodes of said semiconductor chip to terminals of said wiring board corresponding thereto; and

a sealing section in which said semiconductor chip and said

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plurality of bonding wires are covered and sealed with resin, said sealing section being formed of an insulating elastic resin,

wherein said elastic resin has an elastic modulus of 1 to 200 MPa at a temperature of 150°C or higher, and a height of said bonding wire from a bonding start point to a top of said bonding wire is 0.2 mm or less.

12. The semiconductor device according to Claim 11,
wherein a wire horizontal distance from a bonding start point to an end point of said bonding wire is 1.5 mm or less.

13. A semiconductor device comprising:

a semiconductor chip;

a wiring board over which said semiconductor chip is mounted;

a plurality of bonding wires for connecting surface electrodes of said semiconductor chip to terminals of said wiring board corresponding thereto, said bonding wire having a height of 0.2 mm or less from a main surface of said semiconductor chip to a top of said wire; and

a sealing section in which said semiconductor chip and said plurality of bonding wires are covered and sealed with resin, said sealing section being formed of an insulating elastic resin with an elastic modulus of 1 to 200 MPa at a temperature of 150°C or higher,

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wherein said semiconductor device is connected to a mounting board by solder.

14. The semiconductor device according to Claim 13,
wherein a wire horizontal distance from a bonding start point to an end point of said bonding wire is 1.5 mm or less.

15. The semiconductor device according to Claim 13,
wherein said semiconductor device is connected to said mounting board by solder containing no lead (Pb).

16. The semiconductor device according to Claim 13,
wherein said semiconductor device is connected to said mounting board by solder which is mainly comprised of tin (Sn), silver (Ag), and copper (Cu).